

WHAT IS CLAIMED IS:

1. A solution comprising a combination of ammonium paratungstate and hydrochloric acid.
2. A solution prepared by combining ammonium paratungstate with hydrochloric acid.
3. The solution of claim 1 wherein said hydrochloric acid comprises an aqueous solution of about 35-38 weight percent of hydrochloric acid.
4. A method for preparing $\text{WO}_3 \cdot \text{H}_2\text{O}$ comprising preparing a precursor solution comprising a combination of ammonium paratungstate and hydrochloric acid and combining the precursor solution with water to form a precipitate, and isolating the precipitate.
5. A method for preparing anhydrous WO_3 nanopowder comprising preparing a precursor solution comprising ammonium paratungstate and hydrochloric acid, combining the precursor solution with water to form a precipitate, isolating the precipitate, and heating the precipitate to form the anhydrous WO_3 nanopowder.
6. The method of claim 5, wherein the isolated precipitate is heated at a temperature of from about 200°C to about 400°C to form the WO_3 nanopowder.
7. A method for preparing WO_2 comprising preparing a precursor solution comprising ammonium paratungstate and hydrochloric acid, combining the precursor solution with water to form a precipitate, isolating the precipitate, and heating the precipitate to form the anhydrous WO_3 nanopowder, and reacting the
5 anhydrous WO_3 nanopowder with hydrogen gas to form WO_2 .
8. Tungsten trioxide hydrate ($\text{WO}_3 \cdot \text{H}_2\text{O}$) nanosized particles prepared by combining water with a precursor solution comprising a combination of ammonium paratungstate and hydrochloric acid
9. Tungsten trioxide hydrate ($\text{WO}_3 \cdot \text{H}_2\text{O}$) nanosized particles having a platelet morphology.